

OTS: 60-31083

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JPRS: 3045

9 March 1960

AIR RESEARCH DIV.

AUG 12 1960

MAIN FILE

THE TRAINING OF SOLDIERS FOR DEFENSE AGAINST CHEMICAL WARFARE, USSR

[Translation]

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U.S. JOINT PUBLICATIONS RESEARCH SERVICE
205 EAST 42ND STREET, SUITE 300
NEW YORK 17, N.Y.

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FOREWORD

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JPRS: 3045

CSG: 3357-D

Voyenny Vestnik
Military Review
No. 12, 1959
Pages 57-61
Russian, per

I. Romanovski
Colonel

Because of the increasing need for better combat preparedness stipulated by the prevailing military demands of our times, it is necessary to raise the standards of our field forces in all phases of combat training and especially in nuclear defenses. However, it is evident that a number of officers are still showing a considerable lack of competence in troop indoctrination and training.

For instance, Commander Petrov taught his subordinates about the various types of contaminating and radioactive materials and the methods to counteract them. For almost one hour and a half he talked about the means, methods, and symptoms associated with their use, about their effect on the human organism, the appropriate conduct in contaminated areas, and ways and means of defending themselves in such situations. In visual training aids he limited his presentation to the training kit containing insufficient pertinent material. Obviously, as a result of such a "lecture" the soldiers could not adequately retain all of the facts presented to them. They hesitated before answering questions and did not benefit from the lecture at all.

In spite of this, all units possess considerable facilities sufficient for organizing and conducting efficiently all necessary training in defense against chemical warfare. This is accomplished by various methods and in particular by systematic training in defense against gas warfare. Here the enlisted men are taught the fundamentals of defense against nuclear and gas attacks; they are also taught the principal theoretical factors in the two fields. Acquired experience is further improved during the field and tactical training.

We will demonstrate training on the subject of "Poisonous and Radioactive Elements and the Defense Against Them" as presented by Lieutenant Kutsenko to the men of his platoon.

In preparing the lesson plan the commander carefully studied the contents of the topic and prepared background material necessary for the discussion of each question. He requisitioned all pertinent manuals and visual aids from the chemical supply depot and then assimilated all of the material in the chemical training village.

During the initial phase of the lecture the instructor demonstrated before the class various types of shell jackets and models of artillery, projectiles and airplane bombs, special apparatus, chemical land mines, smoke pots, and other means by which the enemy can deliver poisonous and radioactive materials. To illustrate the methods and symptoms of the effect of poisonous gases he used various visual aids, photographs and different sketches prepared in the unit.

After having described the basic characteristics of the poisonous and radioactive elements and their effect on the human organism Lieutenant Kutsenko introduced to the class every item that he had lectured on.

He continued his demonstration by burning miniature smoke pots of mock poison gases to acquaint the soldiers with the different odor characteristics of every one of them. He then demonstrated to the class the effects of poison gases in other situations and the effects they have on plants, soil, equipment and the length of time of takes for the gases to affect them. He also demonstrated the reactions of certain gases when in contact with various solvents.

To illustrate the effects of poisonous and radioactive materials on human organism the instructor showed models and illustrations. In explaining the rules of conduct in contaminated areas Lieutenant Kutsenko exhibited to the soldiers a large placard in color which was prepared in the unit. This visual aid illustrated the standard operating procedure of troop conduct in the contaminated zone. It also illustrated an example of failure to comply with the standing regulations and safety measures when in the contaminated area. This visual training aid allows the soldier to familiarize himself with the standard operating procedure governing the appropriate conduct during combat operations in the area contaminated with poisonous and radioactive matter.

Furthermore the commander acquainted his subordinates with the organizational and equipment tables and the personal as well as the organic equipment used for individual protection against gas and atomic attack. He explained their function and demonstrated their use. After having his troops put on the masks he exploded a few training grenades containing imitation chemical matter similar to the poison gases that he had lectured on, and made his men run through the gas screen he created, thus instilling in them the necessary confidence in their equipment and protective qualities of individual as well as collective means of protection against gas attacks.

In conclusion, half of the soldiers attended the first aid techniques in dealing with skin irritations by gases, while the other half worked on decontamination methods applied to clothing and equipment. Thus the lecture was concluded.

The platoon leader's lecture was skillfully coordinated with numerous visual demonstrations and practical application, thus helping his subordinates derive full value from the lesson in the defense against poisonous, radioactive and bacteriological matter.

On the basis of Lieutenant Kutsenko's experience let us outline the training plan on the subject of "Collective Measures Applied in Defense Against Gas Attack."

Let us note that in order to benefit from this type of training it is essential to have a well equipped mock-village for this purpose. The mock-village should possess different types of shelters, overhead covered trenches, connecting trenches, reinforced pill boxes, and fox holes, all of them equipped for defense against gas attack. This defensive deployment should be similar to that of the company's defense layout. The mock-village and all instructions must instill a complete, well-rounded visual and practical study of all phases of the training program in the defense against gas attack. Most of the training and visual aids for this type of training as well as all necessary material for the mock-village can be prepared by the personnel of the respective units.

When the platoon is brought to the mock village training site, the instructor in charge explains to the troops the purpose of the shelters and dugouts, points out the different types of structures, and the rules and regulations concerning their use. He then assigns to each squad a task of maintaining each separate section and emphasizes the time element involved as well as the qualitative output. It is also advisable to let each individual go through a shelter that is equipped with a ventilating filter for the purpose of acquainting the troops with its operation and handling. To create an appropriate atmosphere a few dummy smoke pots should be exploded around the shelter.

Through this training method the soldiers will acquaint themselves with the elements of mass defensive tactics and will receive the necessary skill in setting up and using the shelters.

Further improvement of the defensive techniques against gas and atomic attack takes place during tactical training. It is here that the troops acquire the necessary skill to function as a unit and conduct military operations in the face of mass destruction by the enemy.

During the tactical dry run let us consider a few methods of defensive measures that can be applied in case of a gas attack on the troops in the field and make some recommendations. Let us suppose that a tactical problem is being conducted on the subject of "A Rifle Platoon in Night Attack."

Before beginning the night problem the officer briefs his men on the possibility of a sudden nuclear or gas attack. Thus, in addition to the usual precautionary measures against the possibility of a gas or nuclear attack, it will be necessary to increase vigilance by assigning more men to observe and watch for any signs of radioactive and poisonous matter in the air. The light signal devices will be used in relaying signals if the gas or nuclear attack is discovered, and a system of immediate warning to all personnel resting in the shelters will be specially worked out. Moreover, the possible stagnation of contaminated air and its penetration to rear echelon areas must be anticipated.

In occupying the attack position it is important that all squad leaders be assigned and briefed their lookouts for radioactive, gas and bacteriological alerts, and also have explained to them the plan of action in case of an alert. Additional work in maintaining and improving the jump off point in anticipation of gas or nuclear attack must be organized. To further develop the troops it will be beneficial to train them in outfitting the overhead section of the trench or dugout.

With the approach of darkness it would be a good idea to explode a few training grenades or some smoke pots not too far from the point of departure. This will allow the lookouts of every squad to detect symptoms of a gas attack and, depending on the circumstances, either report to the squad leader and upon his order sound the general alarm or act independently in sounding the alarm.

Upon receiving the alert signal all personnel should immediately put on their gas masks and take cover in covered trenches. The only personnel remaining outside will be the observers and the fire lookout men. At this time it is advisable to announce to all of the troops that the enemy is taking advantage of the situation by sending out reconnaissance patrols. In this way we can test the ability of our troops to repulse an enemy attack under simulated chemical warfare conditions.

In preparing for the attack it is important to recheck each individual's protective equipment. This precaution, which is often disregarded, will train the soldiers to keep close tabs on their equipment and to replace it when necessary and take good care of it in general.

Before the artillery barrage begins squad leaders should also make sure that all members of their units are acquainted with the alert signals announcing nuclear or gas attacks.

During the attack and mock battle in depth it is necessary to work out a plan and means for the troops to go through the contaminated area. To accomplish this it is necessary to select, designate, and "contaminate" with mock gases the sector leading toward the attack route. In discovering the "contaminated" sector the squad leader gives an order to his men to prepare themselves to meet the gas threat and prepares to go through the contaminated area in accordance with his platoon leader's directions.

During the initial stage it is better for the troops to cross the contaminated area on foot (fast pace in column or line formations and also in short rushes using ponchos and shelter halves when dropping prone on the ground) and subsequently, in armored cars, trucks or in tanks.

In concluding the exercise in nuclear and gas defenses it is advisable to have the troops clear out, disinfect, and degas their personal equipment, weapons, and gas-masks. The hygienic aspects should not be overlooked.

The tactical exercise outline should by no means be limited to the same routine at all times. In every case it will be up to the commander to train his troops properly and to provide them with the maximum pertinent knowledge. It should also be clear that in large scale maneuvers there are greater opportunities to develop the necessary skills in connection with the defense against the means of mass annihilation.

All personnel should be trained to perform under combat conditions individually as well as by functioning as a unit during long periods of time in contaminated areas. Personnel should also be trained to achieve high standards in the use of their individual protective equipment and should be able to degas and disinfect their weapons, equipment, and transportation vehicles.

The troop training for combat performance under gas and nuclear contaminated conditions should be conducted so as to adapt the human organism to be able to withstand wearing a gas mask for considerable periods of time while performing routine duties that sharply increase the usual physical strain (rushes and crawls, carrying of heavy equipment, digging and preparing the trenches, dugouts, connecting trenches, attacks and so forth). Even when the soldier is in a normal condition, he has trouble breathing while

wearing his gas mask, but when he has to exert himself the pressure becomes severe and thus may reflect negatively upon his ability to execute his duties and may be detrimental to his health. That is why this type of training should be conducted under the close supervision of medical personnel, and only with a gradual increase of training load during the entire training year. All personnel ought to be approached and treated on an individual basis depending on each man's health and ability to take it.

As previous experience indicates this type of training should be conducted as follows: a man of average physical stamina should begin by spending 30 minutes in his gas mask with minimum physical exertion and gradually work up to a degree where at the end of the training year he can wear his gas mask for the prescribed length of time and at the same time be able to perform his field duties without being hindered by his mask (with only short intervals for chow). The length of time that the soldier spends in his gas mask should be proportional to the gradual increase of his physical ability to perform his arduous field training and the entire process should be supervised by competent medical personnel.

In the case of veteran soldiers and non-commissioned officers with previous experience the training can be conducted at an accelerated rate.

Close attention must be given to study and teaching of the correct way of adjusting the gas mask and its maintenance and repair. All personnel should be constantly tested by being put through the gas training chamber and trained by a two-stage fumigation method.

Most of the training in chemical warfare should be conducted during tactical field training for only through simulated combat conditions can the trainees benefit and acquire the necessary prophylactic techniques to cope with gas, nuclear, and bacteriological warfare. To create a realistic atmosphere during the training in simulated combat conditions it is advisable to use freely all chemical imitation devices.

The training in gas mask handling and general maintenance in our opinion is practical if conducted once or twice a week for twenty or thirty minutes. As our previous experience shows, the selection of days and hours for training should be conducted in accordance with the unit's daily training schedule, and the sequence training should be carried out in accordance with current standard operating procedures.

In order to save time, the training should be conducted near the unit's location. Training with equipment and vehicles ought to be conducted in motor pools and parks during the scheduled maintenance and repair periods. We feel that this methodology is adequate for our purpose.

The important thing is that the training class should have available all necessary background materials to illustrate every point being discussed. For example, if a squad or platoon is being instructed in the techniques of degassing (disinfection) and deactivation of a mortar, every group should have a mortar in front of them, machine gun-mortar degassing kit, imitation deactivating and disinfecting solution, mock gas matter for application to the object being discussed.

At first the subject matter should be thoroughly studied and understood by all troops. Only then can we proceed to the further improvement of our techniques, and stress on speed, and set up time limits for every phase of our training.

The squad and platoon leaders should conduct the tactical aspects of the training but the overall control should be in the hands of field grade officers and of the commander of the unit's chemical warfare section.

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